Washington, D.C.
20250

# The Economic Research Service in 1983

John E. Lee, Jr.
Administrator

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The mission of the Economic Research Service is to provide timely and reliable agricultural economic information (research, forecasts of major agricultural economic indicators, policy analysis, and data) to assist decisionmaking by farmers, agribusinesses, government officials, and the general public. The Agency's research and analysis focus on U.S. and global food and agriculture, natural resources, and rural people and communities.

Many of the Agency's activities are carried out in cooperation with other publicly funded research institutions — principally other Federal agencies and State universities. Federal agencies requesting work by ERS include the Soil Conservation Service, Foreign Agricultural Service, Farmers Home Administration, Food and Nutrition Service, Forest Service, Environmental Protection Agency, and Agency for International Development.

## FY 1983 Program

Half the work of ERS is on domestic agriculture and food and is conducted by the **National Economics Division** — the capacity of the Na-

tion to produce, its responsiveness to changes in demand, evaluation of alternative commodity policies, the financial status of U.S. farmers, changes in domestic demand, outlook forecasting, data bases, and modeling. One-fourth of the work in ERS is on international trade and is conducted by the **International Economics Division**— foreign country policies that affect our agricultural exports, changes in foreign demand, longrun export strategies, data bases, and modeling.

One-eighth of our work is on natural resources and environmental quality and is conducted by the **Natural Resource Economics Division**—land and water markets development and conservation; land values; air and water quality; pest control; data bases; and modeling. In addition, the Soil Conservation Service funds research by ERS staff on the economics of alternative plans for river basin management. Finally, one-eighth of the ERS programs is devoted to rural development and is conducted by the **Economic Development Division**—population shifts, rural community facilities and services, and the economic impacts of rural growth and development patterns.

**Economic Research Service, Planned Resources, FY 1983**

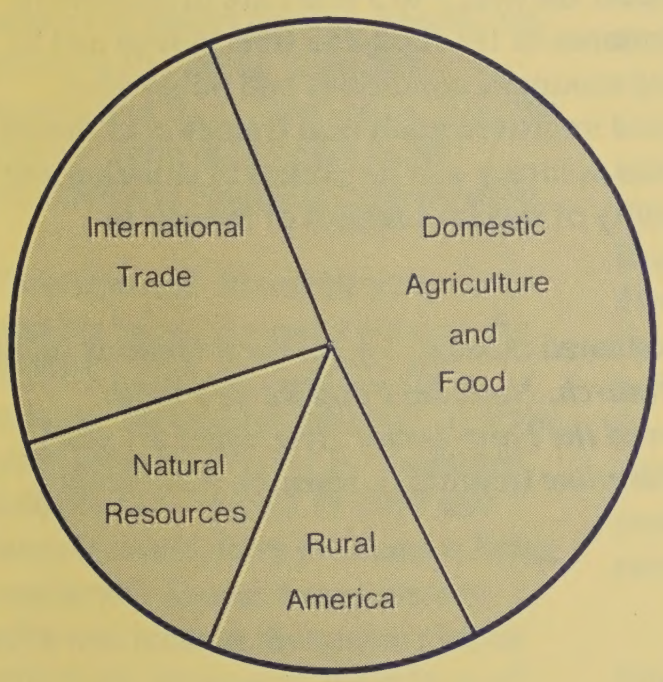
| Division | Funds | | | Staff | | |
|---|---|---|---|---|---|---|
| | Appropriated to ERS | Other[1] | Total | D.C. | Other locations | Total |
| | *—Million Dollars—* | | | *—Number[2]—* | | |
| National Economics | 14.4 | 0.7 | 15.1 | 284 | 33 | 317 |
| International Economics | 6.7 | .6 | 7.3 | 178 | 4 | 182 |
| Natural Resource Economics | 4.1 | 3.1 | 7.2 | 70 | 84 | 154 |
| Economic Development | 4.0 | — | 4.0 | 85 | 8 | 93 |
| Other[3] | 8.6 | — | 8.6 | 187 | 2 | 189 |
| Total | 37.8 | 4.4 | 42.2 | 804 | 131 | 935 |

— = Less than $50,000.
[1]Principally other Federal funds.
[2]Full-time equivalent of all employees.
[3]Includes administrative and management overhead, information and data services, and other indirect costs.

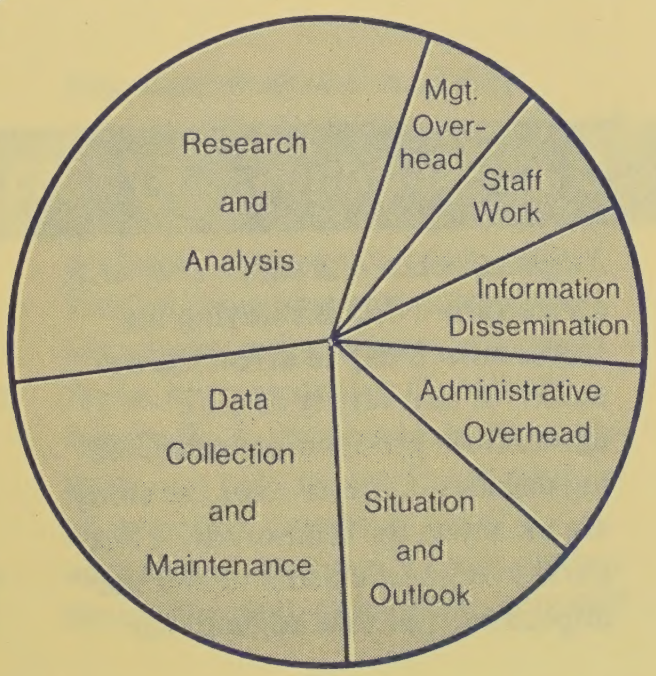
## Plans for FY 1984 and Beyond

Besides maintaining and improving the ongoing information and knowledge base, the Agency is redirecting its resources to assure that its programs will respond effectively to the highest priority needs for economic intelligence, as well as introducing new methods of information transfer (like electronic information dissemination) to communicate its findings to clients. Other areas to be emphasized in the future include basic commodity analysis, research on international monetary system effects on trade, development of a nationally consistent natural resource data base, evaluation of rural development programs, and improved data base management.

## Programs




## Functions



# National Economics Division
# Kenneth C. Clayton, Director

The National Economics Division provides economic intelligence concerning the Nation's food and fiber system and its relationship to the nonagricultural sector and the international economy. The major activities of the Division include:

- Develop and maintain national estimates and forecasts of input and commodity prices and quantities.
- Determine how food and fiber can be produced and distributed most efficiently in the context of the public's preferences.
- Identify the determinants of economic behavior of producers and consumers in the food and fiber system, and assess the relative importance and interdependence of those determinants.
- Develop and maintain economic indicators to monitor the performance, efficiency, and equity of the food and fiber system.
- Identify possible future adjustments in the agricultural system and their potential impacts on the total economy.

Major objectives of the Division over the next 3 to 5 years are to improve its capacity in monitoring the performance of the food and fiber system and in predicting the impacts of changing economic conditions and policy alternatives. An improved data base and improved analytical frameworks should enhance the quality of research, the accuracy and timeliness of situation and outlook information, and the quality of special analyses of interest to policymakers and the public.

The Division's findings are disseminated through *Agricultural Outlook* (monthly), *Agricultural Economics Research, National Food Review* (both quarterlies), *Economic Indicators of the Farm Sector* (five issues per year), *Situation and Outlook* reports, *Farmline* (monthly), research monographs, and journal articles.

## Major Activities — FY 1983

*Responsiveness and capacity of U.S. agriculture.* NED is studying the forces most likely to affect the demand for and supply of U.S. agricultural products over the coming decades. Objectives of the study are to: assess the relationship of exports to domestic demand and the implications of that demand for natural resources, particularly land and water; identify specific forces that might cause major changes in the capacity and responsiveness of U.S. agriculture by the turn of the century; and evaluate the sensitivity of farm income and prices of inputs and products to changes in these forces.

*Dairy policy evaluation.* At the request of Congress, a special NED team, assisted by university economists and advisers from other USDA agencies, is examining the strengths and weaknesses of Federal dairy program alternatives. The study will cover a variety of program options, including price supports and marketing orders, and will include computer simulations of the effects of program alternatives in the 1980's.

*Agricultural finance.* Research is being conducted on the economic impacts of monetary and tax policy changes on the financial condition of the farm sector, the impacts of high interest rates and declining asset values on credit availability, farmers' response to increased financial risk, and the impacts of alternative sources of equity capital. Special emphasis is also being placed on monitoring farm foreclosures and the types of farm enterprises most vulnerable to financial deterioration.

*Food demand.* Research on food demand is being incorporated into the Agency's outlook program to enhance the outlook product. A comprehensive study of U.S. consumer demand for a variety of fluid and manufactured dairy products is being conducted. Demand responses to price and income changes are being estimated, along with the effects of demographic factors. Estimates of changes in demand on individual products and in the composite are also being derived.

*Better situation and outlook information.* The major thrust for 1983 is to enhance basic data and to increase use of research results as a basis for situation and outlook assessments. The basic data system is being enhanced with a more efficient data storage and retrieval system, in conjunction with improved hardware, which is providing additional time for introducing new data sources and for more thorough economic analyses of the data. Situation and outlook results from the Division's internal research program can be communicated to situation and outlook analysts immediately, making possible timely research-based situation and outlook evaluations. Research and outlook and situation analysts will write more special applied-research articles addressing current production and market trends.

*Improved data base.* NED's current data base is inadequate to accommodate multiple area usage of data or to facilitate quick turnaround analysis to changes in economic events of alternative policy scenarios. Data collection is being improved to insure that large data collection activities, such as the Farm Production Expenditures Survey, will allow the development of a broader array of farm sector performance indicators and serve as a basis for policy and financial analysis. A major goal for 1983 is to develop faster retrieval methods and more economical data storage.

*Improved analytical modeling capacity.* The FAPSIM system (Food and Agricultural Policy Simulator) is being extended by adding Commodity Credit Corporation commodity loan relationships and regional supply responses for the major crops, fruits, and vegetables. The USMP system (U.S. Mathematical Programming — a regional nonlinear math programming model of the U.S. agricultural sector) will come on-line during the year. Other plans for 1983

include: incorporate nonlinear demand relationships based on FAPSIM and considerable supply-side detail into the model; develop a quarterly agricultural projections model, which may be based on the FAPSIM model and should provide a useful adjunct for both situation and outlook as well as policy analysis needs; update GEM (General Equilibrium Model) and bring it back on-line for use in research and analysis; and finally, develop data bases and software for the FLIPRIP (Farm Level Income and Policy Recursive Interactive Programming) illustrative farms model for alternative cropping patterns in selected regions.

## Branch Missions and Plans

NED's program of research is divided among nine branches, whose missions and plans for FY 1983 are summarized below.

**The Animal Products Branch** conducts research and analysis on the production, processing, pricing, and distribution of major animal products. The performance of the red meats production and processing sector is the focus for research in FY 1983. Other planned research includes: structural adjustments in the turkey and broiler industries; dairy production, processing cost, and supply responsiveness; and the effects of prices, income, and product substitutes on the demand for meat and milk.

The branch's short-term situation and outlook research is focused on the evolving price-production prospect for major products and on developing more integrated commodity analysis reflecting the interrelationships in demand between competing meats and poultry products. In addition, greater coordination with the Crops Branch is being stressed to capture the effects of changing feed prices and availability.

**The Crops Branch** conducts research on production, marketing, pricing, processing, and final use of major feed, food, and fiber crops, and their derived products. The chief areas of research in FY 1983 are: production and yield responses for cotton, grains, and oilseeds; analyses of marketing channels, marketing strategies, transportation, and handling and storage capacities; and costs for grains and oilseeds.

The branch's short-term situation and outlook program is focused on factors affecting crop markets, prices, and utilization, with special attention on integrating research results with situation and outlook analyses and closer coordination with the Animal Products Branch on feed utilization. In addition, livestock-feed relationships are being updated with both ERS baseline estimates and interagency commodity estimates.

**The Fruits, Vegetables, and Sweeteners Branch** concentrates on the supply-demand relationships for major fruits, vegetables, and sweeteners. The sweeteners research is aimed at identifying relationships that are critical for sugar policy and its administration. The major emphasis for FY 1983 is on assessing the costs of refining sugar; supply-response factors that influence production of major vegetables, particularly potatoes; and the competitive situation of Mexican winter

vegetables vis-a-vis domestic production.

The branch's short-term situation and outlook program focuses on factors affecting production, prices, and utilization of sweeteners and major fruits and vegetables. Special emphasis in FY 1983 is being placed on upgrading the data management system; developing additional analytical tools for forecasting fruit, vegetable, and sweetener market conditions; and conducting market analyses of the sector.

**The Inputs and Finance Branch** conducts research on financial markets serving the farm and food system, and on major economic issues relating to farm inputs. The branch also analyzes the current situation and forecasts the outlook for industrial inputs, energy, and farm finance. The primary emphasis for FY 1983 is on alternate approaches to managing farm risk, leasing options, the impacts of monetary and fiscal policy on the cost and availability of capital to the farm sector, a consistent system of input (including energy) demand relationships, opportunities for biomass conversion on a regional basis, timely analysis of the price and availability of the major farm production inputs, and credit conditions in the farm sector.

**The Farm Sector Economics Branch** conducts research on farm organization, technology, productivity, marketing, and pricing. Emphasis for FY 1983 is on the supply responsiveness of the farm sector to economic and institutional changes, how technological changes may affect supply responsiveness, and the implications for the demand and supply of resources and farm production. Special efforts will be made to monitor structural change in the farm sector using representative farm situations developed from Bureau of the Census data and other sources. The branch will focus on the relationships between cash and futures prices, the effectiveness of marketing orders in enhancing or stabilizing prices, and the role of cooperatives in a competitive market economy.

**The Food Economics Branch** conducts research on food production and marketing beyond the farm gate. Major goals for FY 1983 include: complete a comprehensive study of the structure and performance of the food-manufacturing industry; begin a study to analyze vertical integration in the grain-processing industry, with special attention on how structural changes affect market access and price discovery by farmers; analyze the effects of market structure, input costs, and other factors in interregional food prices; begin a major study of the demand for dairy products; refocus demand research to enhance agency situation and outlook programs; assess methods for updating onfarm grain storage capacity; and complete a study of user-fee impacts on inland waterways. Furthermore, the branch, in conjunction with universities and other agencies of USDA, will begin research on the economics of preventing selected residues in meat and poultry products.

**The Agricultural History Branch** serves as the institutional memory of USDA. Its major goal is to bring historical perspectives to bear on current economic and policy problems through comprehensive research of historical developments. In FY 1983, the branch is evaluating the impacts of the Extension Service on American agriculture, and the role of selected agricultural programs on

agricultural productivity. The branch also, in cooperation with the American Agricultural Economics Association, makes research materials accessible to economists through documentation retrieval and reference room services.

**The Economic Indicators and Statistics Branch** collects and processes primary and secondary data to estimate and forecast indicators of well-being in the agricultural sector, food prices and price spreads, farm productivity, production expenditures and receipts, and farm costs of production estimates. In FY 1983, the branch plans to: analyze the situation and forecast the outlook for the general economy, the farm sector, and food markets; analyze farm sector well-being, food prices, consumption, and marketing; and update cost-of-production estimates for major grains and cotton in the southern States.

**The Food and Agricultural Policy Branch** analyzes current policy issues and provides briefing materials and responses for the Department, Congress, and the public. Studies planned for FY 1983 include: the effects of price and income support policy and grain reserve policy on the performance of American agriculture in domestic and export markets; price and income support as related to national and regional costs of production; effects of macroeconomic uncertainty on performance of the farm sector; interplay of conservation and commodity policies; relationships between domestic commodity programs and world prices; revenue insurance versus commodity options as alternative policy approaches for agriculture; food assistance and commodity distribution programs — including program overlap; effect on the agricultural sector of eliminating the food stamp purchase requirement; purchase behavior under the commodity distribution program; and effectiveness of food assistance programs. To support its current analysis and research functions, the branch maintains a system of analytical models, which permit structural and forecast evaluations of policy and farm sector performance.

## National Economics Division, Planned Resources, FY 1983

| Branch and section | Funds | | | Staff | | |
|---|---|---|---|---|---|---|
| | Appropriated to ERS | Other[1] | Total | D.C. | Other locations | Total |
| | —1,000 dollars— | | | —Number[2]— | | |
| Animal Products: | | | | | | |
| Supply, demand & price analysis | 507 | — | 507 | 12.8 | — | 12.8 |
| Dairy | 423 | — | 423 | 6.4 | 1.9 | 8.3 |
| Red meat | 405 | 127 | 532 | 4.5 | 5.3 | 9.8 |
| Poultry | 230 | 29 | 259 | 4.2 | 2.0 | 6.2 |
| Subtotal | 1,565 | 156 | 1,721 | 27.9 | 9.2 | 37.1 |
| Crops: | | | | | | |
| Supply, demand & price analysis | 526 | — | 526 | 15.2 | — | 15.2 |
| Fibers & oils | 471 | — | 471 | 8.6 | 2.8 | 11.4 |
| Grains & feeds | 544 | — | 544 | 7.4 | 4.0 | 11.4 |
| Subtotal | 1,541 | — | 1,541 | 31.2 | 6.8 | 38.0 |
| Fruits, Vegetables & Sweeteners: | | | | | | |
| Supply, demand & price analysis | 462 | — | 462 | 13.5 | — | 13.5 |
| Fruits & vegetables | 240 | 16 | 256 | 2.3 | 3.0 | 5.3 |
| Sweeteners | 163 | — | 163 | 4.2 | — | 4.2 |
| Subtotal | 865 | 16 | 881 | 20.0 | 3.0 | 23.0 |
| Inputs & Finance: | | | | | | |
| Agricultural finance | 552 | — | 552 | 13.3 | .3 | 13.6 |
| Energy | 414 | 270 | 684 | 8.9 | 3.3 | 12.2 |
| Industrial inputs | 427 | — | 427 | 9.8 | — | 9.8 |
| Subtotal | 1,393 | 270 | 1,663 | 32.0 | 3.6 | 35.6 |
| Farm Sector Economics: | | | | | | |
| Organizational analysis | 308 | 39 | 347 | 6.7 | 1.0 | 7.7 |
| Farm production | 281 | — | 281 | 4.3 | 1.0 | 5.3 |
| Coordination & exchange | 307 | — | 307 | 6.5 | 1.0 | 7.5 |
| Technology & productivity | 232 | — | 232 | 6.5 | — | 6.5 |
| Subtotal | 1,128 | 39 | 1,167 | 24.0 | 3.0 | 27.0 |
| Food Economics: | | | | | | |
| Food manufacturing | 290 | — | 290 | 7.0 | 1.3 | 8.3 |
| Food distribution | 449 | 32 | 481 | 11.9 | — | 11.9 |
| Food demand | 314 | 30 | 344 | 7.9 | — | 7.9 |
| Food protection | 224 | — | 224 | 5.5 | — | 5.5 |
| Transportation | 295 | — | 295 | 9.1 | — | 9.1 |
| Subtotal | 1,572 | 62 | 1,634 | 41.4 | 1.3 | 42.7 |

See footnotes at end of table

Continued—

## National Economics Division, Planned Resources, FY 1983—Continued

| Branch and section | Funds | | | Staff | | |
|---|---|---|---|---|---|---|
| | Appropriated to ERS | Other[1] | Total | D.C. | Other locations | Total |
| | *——1,000 dollars——* | | | *——Number[2]——* | | |
| Agricultural History: | | | | | | |
| Agricultural policy & programs | 238 | — | 238 | 7.4 | .1 | 7.5 |
| Food & farming | 221 | 21 | 242 | 8.6 | .9 | 9.5 |
| Subtotal | 459 | 21 | 480 | 16.0 | 1.0 | 17.0 |
| Economic Indicators & Statistics: | | | | | | |
| National outlook analysis | 285 | — | 285 | 8.0 | — | 8.0 |
| Farm sector analysis | 1,773 | — | 1,773 | 21.6 | — | 21.6 |
| Food price analysis | 448 | — | 448 | 12.6 | — | 12.6 |
| Farm firm analysis | 1,186 | — | 1,186 | 1.9 | 5.6 | 7.5 |
| Subtotal | 3,692 | — | 3,692 | 44.1 | 5.6 | 49.7 |
| Food & Agricultural Policy: | | | | | | |
| Program & policy analysis | 169 | — | 169 | 5.3 | — | 5.3 |
| Agricultural policy | 469 | — | 469 | 8.9 | — | 8.9 |
| Food policy | 175 | 20 | 195 | 4.9 | — | 4.9 |
| Policy systems | 450 | 110 | 560 | 14.4 | — | 14.4 |
| Subtotal | 1,263 | 130 | 1,393 | 33.5 | — | 33.5 |
| Office of the Director[3] | 941 | — | 941 | 13.4 | — | 13.4 |
| Total, NED | 14,419 | 694 | 15,113 | 283.5 | 33.5 | 317.0 |

— = Less than $500 or 0.5 staff year.
[1]Principally other Federal funds.
[2]Full-time equivalent of all employees.
[3]Includes 3.4 staff years on special assignment.

# International Economics Division
## T. Kelley White, Director

The International Economics Division is the major U.S. Government source of information on the economic aspects of the world agricultural and food situation and foreign agricultural and trade policies. IED conducts basic research on world agricultural production, consumption, trade, and policies. IED also monitors the current world agricultural situation including trade. From such information, the Division develops the analytical framework to forecast world agricultural production, consumption, and trade and to analyze how shocks — ranging from weather to agricultural policy — will affect the world agricultural system.

The Division's mission has become increasingly important — and increasingly difficult — with the growing interdependence of the world agricultural and food system. The Division focuses its work most heavily on commodities and countries that have the greatest influence on the well-being of the United States.

The Division's findings are disseminated through research monographs, quarterly situation and outlook reports, annual regional and trade summaries, and internal staff reports.

Over the next 3 to 5 years, IED will continue to provide comprehensive, anticipatory analysis of agricultural supply and demand conditions for countries that have significant impact on the United States through agricultural trade. Special emphasis will be placed on: providing better understanding of the interrelationships between international financial markets and agricultural commodity markets; providing an improved analytical capacity for forecasting long-term shifts in world agricultural supply and demand, especially demand for U.S. agricultural commodities; and increasing the accessibility of IED's data bases through electronic dissemination.

The factors determining supply and demand conditions in foreign markets will be the focus of intensive research. Research will be initiated to investigate the domestic agricultural and trade policy behavior of state-trading countries and especially their response to market conditions. Development of data bases, empirical knowledge based on research and analyses, and analytical models will contribute to meeting the ultimate objectives of evaluating probable consequences of alternative conditions in U.S. and foreign markets.

## Major Activities — FY 1983

*European Community agricultural trade policies.* The agricultural policies of the European Community (EC) tend to limit access of U.S. producers to its markets. In addition, the EC is now moving into traditional U.S. export markets with subsidized exports. IED research is assessing the

impacts of policies that the United States might pursue to gain greater access to the EC markets and to compete with the EC in other export markets, and the gains and losses to the United States and to the EC from liberalized EC trade policies, U.S. export subsidies, and U.S. and world production controls. Alternative price policies for the EC will be examined as will the supply and demand responses to policy changes in the EC. The impacts of EC taxes on vegetable oil and corn gluten imports will also be estimated.

*Country export market profiles.* To support higher U.S. agricultural exports, IED, in cooperation with the Foreign Agricultural Service, is preparing profiles of selected importing countries, primarily rapidly developing middle-income countries in Africa, the Middle East, Asia, and Latin America. The profiles will provide information needed to deal with policy issues between the United States and individual countries as part of a long-term strategy, and to help plan, implement, and evaluate market development strategies in these countries. The profiles will also serve as a base resource for subsequent evaluation of the market expansion activities in those countries.

*Global agriculture to the year 2000.* The above activities focus on trade expansion strategies in the near future. Such strategies must also be developed within the context of longer range forces affecting the United States and world agriculture. Therefore, IED will conduct a long-term assessment of the U.S. and world food systems in the context of a global agriculture study. Areas of special emphasis will include: land, water, and energy supplies and distribution and, thus, production potential; world financial resource distribution and its relationships with agricultural investment (which affects food supplies) and income (which affects demand for food). Within those resource and financial contexts, IED will also analyze the likely consequences of countries' policies of food self-sufficiency, free trade, and decentralized or centralized management on agricultural production and trade.

*World grains-oilseeds-livestock (GOL) model.* The world GOL model is designed for policy analysis and mid- to long-term projections. The annual simulation model uses coefficients directly estimated or adapted from other studies and covers the 19 commodity groups that account for the major part of world agricultural trade and U.S. farm income. By October 1983, the model will comprise 23 submodels, ranging from complex models for single countries (for example, the United States, Japan, and Canada) to simple models for multicountry regions (for example, Southeast Asia). The GOL is one of the major analytical tools used in the global agriculture study. It will be used to test the relative importance for U.S. exports of factors such as foreign agricultural and trade policy changes, general foreign economic growth, and foreign macroeconomic policies.

## Branch Missions and Plans

The Division is organized into nine branches, six with regional responsibilities and three whose responsibilities span across regions. The regional branches focus on how economic and agricultural conditions

within the region affect U.S. trade. The branches concentrate on countries that are major exporters or importers of agricultural commodities of special concern to the United States. The branches' missions and plans for FY 1983 are summarized below.

**The Africa and Middle East Branch** concentrates on South Africa, Zimbabwe, Nigeria, Ivory Coast, Zaire, Sudan, and Kenya in Sub-Saharan Africa, and Turkey, Iran, Iraq, Israel, Algeria, Egypt, Morocco, Kuwait, and Saudi Arabia in the Middle East and North Africa. In addition to the annual situation and outlook summaries, other projects will concern: country export market profiles on Nigeria, Algeria, Saudi Arabia, Kuwait, Iraq, and the United Arab Emirates; food import demand in North African and Middle East OPEC countries; and the agricultural production potential in Sudan and Zimbabwe and its impact on potential U.S. markets in Africa.

**The Asia Branch** is the pre-eminent source of information on agriculture on the People's Republic of China (PRC) and has facilitated contact with PRC officials in the agricultural sector. Output on the PRC will include a country export market profile and a report on the PRC's statistics and economic planning institutions. Other Asian countries subject to continuous indepth analysis are Japan, India, South Korea, Philippines, Hong Kong, Singapore, Taiwan, Indonesia, Bangladesh, Pakistan, Sri Lanka, Burma, Malaysia, Thailand, and Vietnam. Country export market profiles will be prepared for PRC, Taiwan, South Korea, Indonesia, and Malaysia. Country submodels of the GOL for Japan and Taiwan will be completed. Studies will focus on the feed-livestock sectors of Japan, Taiwan, South Korea, and several Southeast Asian countries. Annual situation and outlook reports will be published for four subregions of Asia, including the PRC.

**The Eastern Europe and the USSR Branch** focuses on current analysis of political, financial, and weather changes because of the critical political importance of the region to U.S. agricultural trade. Research deals with factors influencing agricultural production, factors that differ from those in market economies. Analyses focus on: the implications for agriculture of the 1981-1985 five-year plans for five Eastern Europe countries; U.S. trade prospects given credit availabilities and hard currency problems of the countries; the Soviet Union's agrochemical complex, including production capabilities, application techniques, and yield responses; and the U.S.-USSR Agricultural and Grain Agreements. Annual situation reports will also be published.

**The Latin America Branch** covers South America, Central America, Mexico, and the Caribbean. The branch concentrates on assessing the long-term potential for tapping the rich agricultural resource base, especially in Mexico, Brazil, and Argentina; the potential for growth in food and feed demand and its impacts on trade with the United States, particularily in Brazil, Venezuela, and the Caribbean; and the regional situation and outlook reports. The branch is preparing country export market profiles on Dominican Republic, Brazil, Mexico, Venezuela, Costa Rica, Colombia, Jamaica, and Honduras.

**The North America and Oceania Branch** has two major responsibilities: to cover in depth the major U.S. competitors in the grain and livestock trade (i.e., Canada, Australia, and New Zealand) and to assess the place of U.S. agriculture and trade in the context of the world agricultural situation. Analyses focus on the 1982 agricultural situation and the outlook for 1983 for Canada and Oceania; planned expansions of the Canadian and Australian agricultural/grain sectors; Canada's transportation network's impact on grain exports; the competitiveness of the Canadian livestock industry with that of the United States; Australian beef exports to the United States and Japan; and the impacts of major economic and technological trends in U.S. agriculture.

**The Western Europe Branch** analyzes future demand in Western Europe for U.S. agricultural products and factors affecting the competitiveness in world markets of U.S. versus Western European agricultural products. The European Community, which imports 20 percent of U.S. agricultural exports and is a major competitor in world export markets, is the subject of most analyses. Research focuses on the underlying reasons for protectionist agricultural policies practiced by the Western European countries and their impacts on U.S. agricultural trade. Activities focus on: gains and losses to the United States and to the EC due to changes in EC trade policies; the relationship between policy prices and the actual prices received by farmers for important grain and livestock products; income and price elasticities of demand for nonfeed uses of agricultural commodities; food processing and distribution systems and the implications for exports of high-value U.S. agricultural products; analyses of the productive potential of the agricultural sector; and the short-term trade prospects.

**The World Analysis Branch** assesses the world food and agricultural situation; maintains the Agency's data base on world agricultural production and trade; works with other agencies in the Department to produce departmental estimates of world agricultural supply, demand, and trade; and is responsible for information on the trade impacts of foreign exchange movements and international price developments. Activities of the branch include: coordinating preparation of the quarterly Agency reports, *World Agriculture* and *Agricultural Exports*; contributing to monthly departmental reports on the world agricultural supply and demand estimates and world crop situations; preparing a bimonthly compendium of statistics on the foreign agricultural trade of the United States as well as annual calendar and fiscal year summaries on trade; publishing an annual index on world agricultural production by commodity, region, and country; and coordinating development of 10-year baseline forecasts. The branch maintains the Outlook and Situation Information System (OASIS) and develops improvements in OASIS and other data systems of the Division.

**The Trade Policy Branch** integrates information on the impacts of agricultural and trade policies of foreign governments, international organizations, and U.S. agricultural trade policies. Analyses will focus on: the impact of recent changes in the US. exchange rate on prices of major agricultural exports and on the level of stocks held under provisions

of the farm program; the structure and conduct of world commodity markets; the major factors likely to influence U.S. farm export prices and volumes for the next 20 years (in support of the global agriculture study); international trade negotiations, and domestic U.S. policies that have a broad impact on U.S. and world agriculture and trade. Underpinning these analyses are the world agricultural models which the branch develops and maintains: the world grains-oilseeds-livestock model (GOL), the Basic Linked System developed at the International Institute for Applied Systems Analysis (IIASA), and the commodity-specific models such as FEEDSIM and WHEATSIM. Also underpinning the research is the branch's continuous monitoring of international economic and trade policy developments.

**The Agricultural Development Branch** focuses on factors affecting agricultural development and on the relationship between development and growth in agricultural trade. This information helps to guide U.S. policy and program decisions regarding food aid, export credit programs, and U.S. market development strategies. Analyses focus on: the impact of changes in energy prices and availabilities on agricultural production; agricultural supply projections to the year 2000 for the global agriculture study; and the relationship between income levels and the demand for and trade in particular agricultural commodities.

## International Economics Division, Planned Resources, FY 1983

| Branch and section | Funds | | | Staff | | |
|---|---|---|---|---|---|---|
| | Appropriated to ERS | Other[1] | Total | D.C. | Other locations | Total |
| | —1,000 dollars— | | | —Number[2]— | | |
| Africa & Middle East: | | | | | | |
| Situation & outlook | 306 | 95 | 401 | 8.0 | — | 8.0 |
| Research | 364 | 257 | 621 | 10.0 | — | 10.0 |
| Subtotal | 670 | 352 | 1,022 | 18.0 | — | 18.0 |
| Asia: | | | | | | |
| Situation & outlook | 296 | 30 | 326 | 8.3 | — | 8.3 |
| China | 257 | — | 257 | 6.8 | — | 6.8 |
| Country structure demand & trade | 332 | — | 332 | 8.4 | — | 8.4 |
| Subtotal | 885 | 30 | 915 | 23.5 | — | 23.5 |
| Eastern Europe & USSR: | | | | | | |
| USSR | 235 | — | 235 | 6.5 | — | 6.5 |
| Eastern Europe | 180 | — | 180 | 5.0 | — | 5.0 |
| Subtotal | 415 | — | 415 | 11.5 | — | 11.5 |
| Latin America: | | | | | | |
| Situation & outlook | 245 | 35 | 280 | 7.0 | — | 7.0 |
| Demand, trade & structure | 320 | — | 320 | 9.0 | — | 9.0 |
| Subtotal | 565 | 35 | 600 | 16.0 | — | 16.0 |
| North America & Oceania: | | | | | | |
| Situation & outlook | 210 | — | 210 | 6.0 | — | 6.0 |
| Demand, trade & structure | 225 | — | 225 | 7.0 | — | 7.0 |
| Subtotal | 435 | — | 435 | 13.0 | — | 13.0 |
| Western Europe: | | | | | | |
| Situation & outlook | 271 | — | 271 | 7.0 | — | 7.0 |
| Demand & trade | 212 | — | 212 | 5.5 | — | 5.5 |
| Country agriculture structure | 194 | 25 | 219 | 5.0 | — | 5.0 |
| Subtotal | 677 | 25 | 702 | 17.5 | — | 17.5 |

See footnotes at end of table

Continued—

## International Economics Division, Planned Resources, FY 1983—Continued

| Branch and section | Funds | | | Staff | | |
|---|---|---|---|---|---|---|
| | Appropriated to ERS | Other[1] | Total | D.C. | Other locations | Total |
| | *——1,000 dollars——* | | | *——Number[2]——* | | |
| World Analysis: | | | | | | |
| Commodity analysis | 358 | 60 | 418 | 10.9 | — | 10.9 |
| Food & agricultural trade statistics | 376 | 28 | 404 | 11.2 | — | 11.2 |
| Outlook | 308 | — | 308 | 7.0 | — | 7.0 |
| Price analysis & outlook | 188 | 20 | 208 | 5.9 | — | 5.9 |
| Subtotal | 1,230 | 108 | 1,338 | 35.0 | — | 35.0 |
| Trade Policy: | | | | | | |
| International commodity policy | 354 | — | 354 | 6.9 | 4.0 | 10.9 |
| Policy systems | 326 | — | 326 | 8.0 | — | 8.0 |
| Policy intelligence | 180 | — | 180 | 4.6 | — | 4.6 |
| Subtotal | 860 | — | 860 | 19.5 | 4.0 | 23.5 |
| Agricultural Development: | | | | | | |
| Resources & technology | 227 | — | 227 | 6.2 | — | 6.2 |
| Food demand & utilization | 135 | 57 | 192 | 3.2 | — | 3.2 |
| Trade & development | 178 | — | 178 | 3.6 | — | 3.6 |
| Subtotal | 540 | 57 | 597 | 13.0 | — | 13.0 |
| Office of the Director | 425 | — | 425 | 11.0 | — | 11.0 |
| Total IED | 6,702 | 607 | 7,309 | 178.0 | 4.0 | 182.0 |

— = Less than $500 or 0.5 staff year.
[1]Principally other Federal funds.
[2]Full-time equivalent of all employees.

## Natural Resource Economics Division
## Velmar W. Davis, Acting Director

The Natural Resource Economics Division (NRED) oversees a program of research, assistance, and consultation relating to the use, conservation, development, management, and control of natural resources, and the enhancement of environmental quality. Primary emphasis is on problems of resource management, both national and regional, as they pertain to the Department of Agriculture.

Farmers now use record amounts of land for crop production resulting in increased areas exposed to sheet and rill erosion. Irrigated acreages are at record levels, inducing high levels of water use. Some water comes from aquifers that cannot be replenished. Nonagricultural competition for land and water is a continuing concern even though current resource availability and productive capacity seem adequate. The long-term capability of the United States to maintain its natural advantages as a major world food supplier depends on how effectively its soil and water resources are used. The longrun research plans of the Division are directed to major public concerns about the land and water base: erosion, irrigation, drawdown of aquifers, and U.S. capability to maintain its natural advantages as a world food supplier. This research requires inventory information on the status and condition of land and water resources, trends in their use and availability, and the actions of farmers and landowners in using and managing land and water resources. Periodic inventories are made to detect emerging land and water problems. A national analytical system will be developed to study the effectiveness of current policies and programs and analyze emerging land and water issues.

## Major Activities — FY 1983

*Natural resource analytical and data capability.* Work is beginning on a national economic analytical capability to analyze land and water policy programs and issues of the 1980's. Initial work is focusing on model design and core data requirements.

*Land conversion and development.* The costs of converting pasture, range, and forest lands to cropland are being estimated. These data are being used to analyze potential land use changes and productivity improvements through drainage and clearing. The data are being developed in a manner consistent with the national data and model specifications. Initially, the data are being summarized and interpreted in a descriptive manner, but they will be used later as a key data set for comprehensive analyses of land issues.

*Aggregate soil and water management and conservation technology.* Primary data are being collected to appraise the aggregate production impacts and economic effects of adopting alternate soil management and conservation strategies and water use and conservation approaches. These data and analyses will serve the needs identified by the 1975 National Water Assessment and the 1980 Resource Conservation Act appraisal and evaluation process. The data sets

will include information on the productivity of water and on erosion/yield relationships, and will be usable for analyses of issues that are national in scope.

*Water and agriculture.* The Division will prepare a major report on: water availability for agriculture; trends in water development and use; water's aggregate contribution to current and future agricultural production, stability, and risk aversion; the magnitude of the water crisis; the need for water conversion or development; and major water management issues facing agriculture in the 1980's and 1990's.

*Land values.* The Division will assume the responsibility for an expanded program of research and current intelligence on land values, including collecting and monitoring land value data and analyzing land value situation and outlook.

## Branch Missions and Plans

The Division is organized into five branches whose missions and plans for FY 1983 are summarized below.

**The Land Branch** analyzes the supply and productivity of agricultural lands, including shifts to and from agricultural use; monitors land conservation; analyzes the economics of conservation investment; appraises the economic effectiveness of range management; monitors and analyzes landownership trends, including foreign investment; collects annual data on land prices to monitor trends; analyzes the impact of land values on land uses and ownership; and assesses the effects of ownership patterns on resource use and the distribution of wealth and income.

**The Water Branch** conducts research on the conservation, use, and quality of water. Research is conducted on the effects of water-conserving practices on farmers' net returns and community income, energy costs of pump irrigation, potential for irrigation in humid areas, conflicts between stream flow requirements and water demands, cost and benefits of reducing soil erosion and water pollution, and the distribution of conservation benefits and costs among private and public groups. Much of the work is done with other agencies, especially USDA's Soil Conservation Service. The branch also evaluates pilot projects in USDA's Rural Clean Water Program by evaluating the impacts on farmers and communities of management practices to improve water quality.

**The Pest Control Branch** estimates pesticide availability and use, evaluates the economic feasibility of new pest control technology, and estimates the costs of improving environmental quality in U.S. food and fiber production. The branch focuses on farm costs, farm income, and consumer prices that would result from the adoption of alternative pest control strategies; examines alternative biological, cultural, and chemical controls (including integrated systems) and determines their economic feasibility; and collects and analyzes data on the use and costs of pesticides and pest control practices by farmers — data essential for EPA to develop its regulatory options and for the Department to establish its position on them. The research is carried out in cooperation

with other USDA agencies and State Agricultural Experiment Stations and Extension Services.

**The River Basins Branch** assists USDA river basin planning with studies on soil erosion, water quality, water conservation, and designation of prime farmland. Studies are conducted in cooperation with the Soil Conservation Service (SCS), Forest Service, and State sponsors. Funding is provided by SCS. The program activities are predominantly conservation operations, but include some small projects to rehabilitate irrigation systems, improve management practices, and control animal wastes.

**The Resource Systems Branch** works to improve natural resources information and data bases to strengthen program and policy analysis capacity in the Division, the Agency, USDA and other departments. The branch designs analytical procedures for evaluation of joint land and water management issues and application in comprehensive national-regional level studies.

**Natural Resource Economics Division, Planned Resources, FY 1983**

| Branch and section | Funds | | | Staff | | |
|---|---|---|---|---|---|---|
| | Appropriated to ERS | Other[1] | Total | D.C. | Other locations | Total |
| | *——1,000 dollars——* | | | *——Number[2]——* | | |
| Land: | | | | | | |
| Landownership | 433 | — | 433 | 9.8 | 1.5 | 11.3 |
| Land use | 415 | 148 | 563 | 3.2 | 7.8 | 11.0 |
| Subtotal | 848 | 148 | 996 | 13.0 | 9.3 | 22.3 |
| Water: | | | | | | |
| Water use & conservation | 578 | 46 | 624 | 4.3 | 11.0 | 15.3 |
| Water quality | 462 | 343 | 805 | 4.9 | 11.3 | 16.2 |
| Water Institutions | 88 | 189 | 277 | 2.8 | 6.2 | 9.0 |
| Subtotal | 1,128 | 578 | 1,706 | 12.0 | 28.5 | 40.5 |
| Pest Control: | | | | | | |
| Pesticide regulation | 600 | — | 600 | 9.1 | 2.0 | 11.1 |
| Pest management | 506 | — | 506 | 6.8 | 3.0 | 9.8 |
| Subtotal | 1,106 | — | 1,106 | 15.9 | 5.0 | 20.9 |
| River Basins: | | | | | | |
| West | — | 463 | 463 | .5 | 7.3 | 7.8 |
| Midwest | — | 446 | 446 | .5 | 6.3 | 6.8 |
| Northeast | — | 705 | 705 | 1.0 | 11.7 | 12.7 |
| Southeast | — | 550 | 550 | 1.0 | 11.5 | 12.5 |
| Subtotal | — | 2,164 | 2,164 | 3.0 | 36.8 | 39.8 |

See footnotes at end of table

Continued—

## Natural Resource Economics Division, Planned Resources, FY 1983—Continued

| Branch and section | Funds | | | Staff | | |
|---|---|---|---|---|---|---|
| | Appropriated to ERS | Other[1] | Total | D.C. | Other locations | Total |
| | —*1,000 dollars*— | | | —*Number*[2]— | | |
| Resource Systems: | | | | | | |
| Resource analysis | 275 | 139 | 414 | 5.0 | 2.7 | 7.7 |
| Resource data | 289 | 51 | 340 | 10.8 | 1.6 | 12.4 |
| Subtotal | 564 | 190 | 754 | 15.8 | 4.3 | 20.1 |
| Office of the Director | 429 | — | 429 | 10.0 | — | 10.0 |
| Total, NRED | 4,075 | 3,080 | 7,155 | 69.7 | 83.9 | 153.6 |

— = Less than $500 or 0.5 staff year.
[1]Principally other Federal funds.
[2]Full-time equivalent of all employees.

# Economic Development Division
## Kenneth L. Deavers, Director

The Economic Development Division provides research to support USDA's three rural development roles: monitor assistance programs to individuals, firms, and local governments; represent rural interests to other Federal agencies; and develop strategies and set goals, as required by the Rural Policy Act of 1980. To carry out these responsibilities, EDD analyzes trends in rural population, employment, income, rural housing, credit, and local government services and finances.

Federal programs for rural development have been shaped principally as a response to problems of population decline, inadequate housing, undeveloped infrastructure, and rural poverty. Changes in these conditions in the 1970's have altered the context and relevance of some Federal programs. EDD's research over the next 5 years will give priority to increasing our understanding of rural needs.

## Major Activities — FY 1983

*Rural population.* Using social and economic data from the 1980 Census, EDD is analyzing the causes and consequences of rural population changes in the 1970's and policy implications in the 1980's. Through the 1970's, EDD monitored the changes in internal U.S. migration patterns, which have led to rural growth's exceeding urban growth for the first time in this century.

*Rural communities.* Many Federal programs provide financial assistance to local governments to improve the quality and quantity of public infrastructure. EDD is analyzing the 1980 Census data to assess the actual conditions of rural infrastructure and how those conditions vary by size of community, region, income, and growth rate. Absence of such information hampers decisions on Federal assistance.

*Impacts of growth.* Since Federal subsidies to rural areas have been justified chiefly on equity grounds, it is important to understand who gains and who loses — long-term residents, new immigrants, new entrants to the labor force, the underemployed, and the poor. EDD will also collect information on the impact of rural growth on farming and farm families.

*Research-extension links.* Through the Extension-CRD (Community and Rural Development) program, USDA and the States have a significant commitment to assist local governments with improved information for decisionmaking. Proposals to transfer functions to local governments increase the demand and need for such assistance. In FY 1983, EDD and the Extension Service are funding a program to improve linkages between EDD research and users in local governments. Research will be initiated to classify local governments by characteristics and type of assistance needed.

## Branch Missions and Plans

The Division is organized into two branches whose missions and plans for FY 1983 are summarized below.

**The Community Resources Branch** conducts basic and applied research on housing, rural business and credit, State and local government services, and impacts of Federal policy on rural areas. Major emphases include: the condition of rural housing and characteristics of occupants; the role of credit and characteristics of credit markets, both for housing and for business; changes in economic structure of rural areas; and services provided for rural people by State and local governments and the financing of those services.

**The Human Resources Branch** conducts research on the living conditions and opportunities for advancement of residents of nonmetropolitan areas. Major emphases include: causes and consequences of population change; interrelationships between the nonmetro demographics and the general welfare of the United States; trends in the composition of the farm and nonfarm labor forces; employment, earnings, worker characteristics, mobility, and the status and problems of migratory farmworkers and other special groups in the rural labor force; and income and well-being of nonmetro residents and strategies for improving their status.

**Economic Development Division, Planned Resources, FY 1983**

| Branch and section | Funds | | | Staff | | |
|---|---|---|---|---|---|---|
| | Appropriated to ERS | Other[1] | Total | D.C. | Other locations | Total |
| | *——1,000 dollars——* | | | *——Number[2]——* | | |
| Community Resources: | | | | | | |
| Housing | 316 | — | 316 | 9.5 | — | 9.5 |
| State & local government | 387 | 35 | 422 | 9.5 | 1.7 | 11.2 |
| Rural business & credit | 630 | — | 630 | 14.8 | 1.0 | 15.8 |
| Rural policy impacts | 261 | — | 261 | 2.2 | 2.4 | 4.6 |
| Subtotal | 1,594 | 35 | 1,629 | 36.0 | 5.1 | 41.1 |
| Human Resources: | | | | | | |
| Population studies | 434 | — | 434 | 9.5 | — | 9.5 |
| Income studies | 778 | — | 778 | 13.7 | 2.0 | 15.7 |
| Rural labor markets | 808 | — | 808 | 15.8 | .9 | 16.7 |
| Subtotal | 2,020 | — | 2,020 | 39.0 | 2.9 | 41.9 |
| Office of the Director | 376 | — | 376 | 10.0 | — | 10.0 |
| Total, EDD | 3,990 | 35 | 4,025 | 85.0 | 8.0 | 93.0 |

— = Less than $500 or 0.5 staff year.
[1]Principally other Federal funds.
[2]Full-time equivalent of all employees.

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